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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/806,589 | 03/23/2004 | Robin David Hill | 2432-00015 | 2232 |

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EXAMINER

BROUSSARD, COREY M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2835

DATE MAILED: 10/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,589

Applicant(s)

HILL, ROBIN DAVID

Examiner

Corey M. Broussard

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2005. (RCE)
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "sharp deviation" is indefinite. It is unclear how much of a deviation is considered "sharp".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5 and 8-10 as best as they can be understood are rejected under 35 U.S.C. 102(b) as being anticipated by Lof (PN 5,543,774). With respect to claim 1, Lof teaches a fuse arrangement comprising a circuit board having a plurality of conductive tracks thereon (see Fig. 1), at least two of the conductive tracks being electrically connected to respective terminal regions (see Fig. 2A, left and right circular contacts are the terminals); the said at least two of the conductive tracks each including a fuse region (8) of reduced cross-sectional area, each fuse region being shaped to cause a deviation

in the current flow through the fuse region (col 2 lines 49-51), and wherein each conductive track includes a part extending from each fuse region and to the associated terminal region, each said part of each conductive track being free from sharp deviations (see Fig. 2A, a part of 3 extending between the contact and the fuse region 8 is free from sharp deviations).

5. With respect to claim 2, Lof teaches wherein the fuse region comprises first and second parts which are angled to one another to form the deviation (see Fig. 2B, the vertical and horizontal parts of 8 form an angle).

6. With respect to claims 3 and 4, Lof teaches wherein the first and second parts are angled to one another by an angle falling within the range of 70 to 110 degrees, or about 90 degrees (see Fig. 2B, the parts form a 90 degree angle).

7. With respect to claim 5, Lof teaches wherein a sharp indent is formed in the fuse region to form the deviation to current flow (see Fig. 2A, 2B, when 3 becomes 8 there is a sharp indent reducing the width of the conductor).

8. With respect to claim 8, Lof teaches a fuse arrangement comprising a circuit board having a terminal region and a conductive track electrically connected to the terminal region (see Fig. 1), the conductive track including a fuse region (8) of reduced cross-sectional area, the fuse region being shaped to cause a deviation in the current flow through the fuse region (see Fig. 2B), the conductive track including a part extending from the terminal region to the fuse region, said part of the conductive track being free from sharp deviations (see Fig. 2A, conductive track 3 extending between the round contact and the fuse region 8 is free from sharp deviations), and wherein the fuse

region comprises first and second parts which are angled to one another to form the deviation (see Fig. 2B, the vertical and horizontal parts of 8 form an angle).

9. With respect to claims 9 and 10, Lof teaches wherein the first and second parts are angled to one another by an angle falling within the range of 70 to 110 degrees, or of about 90 degrees (see Fig. 2B, the parts form a 90 degree angle).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 6, 7, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lof (PN 5,543,774) in view of Breece (PN 4,616,286). Lof teaches the device as applied to claims 1 and 8 above, but lacks specific teaching of a clamping device. Breece teaches using a clamping device such as a zener diode (12) or a suppressor (14) with a fuse (see Fig. 1). It would have been obvious to a person of ordinary skill in the art to use the suggestion of clamping devices of Breece with the fuse structure of Lof for the benefit of increased protection and response time to transients in the circuit.

Response to Arguments

12. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey M. Broussard whose telephone number is 571 272 2799. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on 571 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**ANATOLY VORTMAN
PRIMARY EXAMINER**